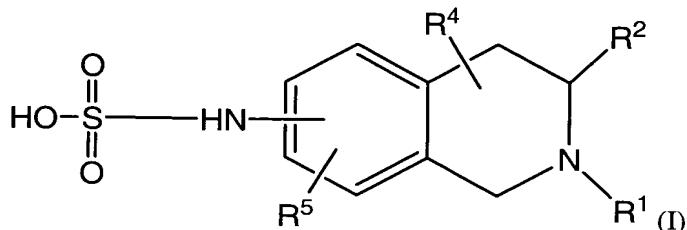


## WHAT IS CLAIMED IS:

1. A compound according to formula I:



wherein:

A) R<sup>1</sup> is -L<sup>1</sup>-[C(R<sup>6a</sup>R<sup>6b</sup>)]<sub>m</sub>R<sup>7</sup>, wherein:

- a) L<sup>1</sup> is selected from the group consisting of covalent bond, -O-, -S-, -N-, -CO<sub>2</sub>-, -CO-, -OCO<sub>2</sub>-, -SO-, -SO<sub>2</sub>-, -CSN(R<sup>8</sup>)-, -CON(R<sup>8</sup>)O-, -CON(R<sup>8</sup>)-, -OCON(R<sup>8</sup>)-; wherein R<sup>8</sup> is hydrogen or substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl;
- b) R<sup>6a</sup> and R<sup>6b</sup> are each independently selected from the group consisting of hydrogen, -OR<sup>9</sup>, -N(R<sup>9</sup>)<sub>2</sub>, -CO<sub>2</sub>R<sup>9</sup>, -CON(R<sup>9</sup>)<sub>2</sub>, -NHCOR<sup>9</sup>, -NHCO<sub>2</sub>R<sup>9</sup>, =NR<sup>9</sup>, -R<sup>9</sup>, and mixtures thereof; wherein each R<sup>9</sup> is independently selected from the group consisting of hydrogen, substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl, and substituted or unsubstituted aryl or alkylenearyl; or two R<sup>9</sup> units can be taken together to form a substituted or unsubstituted carbocyclic or heterocyclic ring comprising from 3 to 7 atoms;
- c) m is an index selected from 0 to 5;
- d) R<sup>7</sup> is selected from the group consisting of nil, hydrogen, substituted or unsubstituted C<sub>1</sub>-C<sub>10</sub> alkyl, substituted or unsubstituted C<sub>1</sub>-C<sub>10</sub> heteroalkyl, substituted or unsubstituted hydrocarbyl, substituted or unsubstituted heterocyclyl, substituted or unsubstituted aryl or alkylenearyl, substituted or unsubstituted heteroaryl or alkyleneheteroaryl; or
- e) R<sup>7</sup> and a R<sup>9</sup> can be taken together to form a substituted or unsubstituted carbocyclic or heterocyclic ring comprising from 3 to 7 atoms;

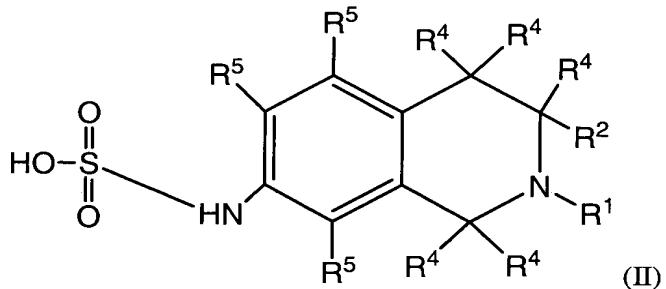
B) R<sup>2</sup> is -(CH<sub>2</sub>)<sub>j</sub>-L<sup>2</sup>-[C(R<sup>11a</sup>R<sup>11b</sup>)]<sub>g</sub>R<sup>12</sup>, wherein:

- a) j is an index selected from 0 to 5;

- b)  $L^2$  is selected from the group consisting of covalent bond, -O-, -S-, -N-, -CO<sub>2</sub>-, -CO-, -OCO<sub>2</sub>-, -SO-, -SO<sub>2</sub>-, -CSN(R<sup>10</sup>)-, -CON(R<sup>10</sup>)-, -CON(R<sup>10</sup>)O-, -OCON(R<sup>10</sup>)-; wherein R<sup>10</sup> is hydrogen or substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl;
- c) R<sup>11a</sup> and R<sup>11b</sup> are each independently selected from the group consisting of hydrogen, -OR<sup>13</sup>, -N(R<sup>13</sup>)<sub>2</sub>, -CO<sub>2</sub>R<sup>13</sup>, -CON(R<sup>13</sup>)<sub>2</sub>, -NHCOR<sup>13</sup>, -NHCO<sub>2</sub>R<sup>13</sup>, =NR<sup>13</sup>, -R<sup>13</sup>, and mixtures thereof; wherein each R<sup>13</sup> is independently selected from the group consisting of hydrogen, substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl, and substituted or unsubstituted aryl or alkylenearyl; or two R<sup>13</sup> units can be taken together to form a substituted or unsubstituted carbocyclic or heterocyclic ring comprising from 3 to 7 atoms;
- d) g is an index selected from 0 to 5;
- e) R<sup>12</sup> is selected from the group consisting of nil, hydrogen, substituted or unsubstituted C<sub>1</sub>-C<sub>10</sub> alkyl, substituted or unsubstituted hydrocarbyl, substituted or unsubstituted heterocyclyl, substituted or unsubstituted aryl or alkylenearyl, substituted or unsubstituted heteroaryl or alkyleneheteroaryl; or
- f) R<sup>12</sup> and a R<sup>13</sup> can be taken together to form a substituted or unsubstituted carbocyclic or heterocyclic ring comprising from 3 to 7 atoms; and

C) R<sup>4</sup> and R<sup>5</sup> are each independently selected from hydrogen or substitution unit.

2. The compound of claim 1 having the formula (II):



3. The compound of claim 2, wherein:

- a) j is 0; and
- b)  $L^2$  is -CON(R<sup>8</sup>)-; and
- c) R<sup>6a</sup> and R<sup>6b</sup> are each hydrogen.

4. The compound of Claim 3, wherein  $L^1$  is selected from the group consisting of -CO-, -CO<sub>2</sub>-, and SO<sub>2</sub>-.
5. The compound of Claim 4, wherein R<sup>7</sup> is substituted or unsubstituted phenyl.
6. The compound of Claim 2, wherein  $L^1$  is selected from -CO-, -CO<sub>2</sub>-, -CONH-, and -SO<sub>2</sub>-.
7. The compound of Claim 6, wherein R<sup>2</sup> is hydrogen.
8. The compound of Claim 2, wherein
  - a) R<sup>2</sup> is hydrogen; and
  - b)  $L^1$  is -CO-
9. The compound of Claim 8, wherein:
  - a) R<sup>6a</sup> and R<sup>6b</sup> are each hydrogen; and
  - b) m is an index from 1-5.
10. The compound of Claim 9, wherein R<sup>7</sup> substituted or unsubstituted phenyl.
11. The compound of Claim 2, wherein:
  - a) j is 0; and
  - b)  $L^2$  is -CON(R<sup>8</sup>)-.
12. The compound of Claim 11, wherein:
  - a)  $L^1$  is selected from -CO-, and -CO<sub>2</sub>-, and
  - b) R<sup>7</sup> is substituted or unsubstituted C<sub>1</sub>-C<sub>10</sub> alkyl.
13. The compound of Claim 2, wherein:
  - a)  $L^1$  is -CO<sub>2</sub>-, and
  - b) R<sup>7</sup> is substituted or unsubstituted C<sub>1</sub>-C<sub>10</sub> alkyl.
14. The compound of Claim 13, wherein:
  - a) j is 0; and

b)  $L^2$  is selected from covalent bond,  $-CO_2-$ , and  $-CON(CH_3)O-$

15. The compound of Claim 14, wherein  $R^{12}$  is selected from substituted or unsubstituted  $C_1-C_{10}$  alkyl.

16. The compound of Claim 1, wherein the compound is selected from the group consisting of:

(S)-3-Methylcarbamoyl-7-sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid *tert*-butyl ester; [(S)-3-Methylcarbamoyl-2-(3-phenyl-propionyl)-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; [(S)-2-Benzylcarbamoyl-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; (S)-(3-Methylcarbamoyl-2-phenylmethanesulfonyl-1,2,3,4-tetrahydro-isoquinolin-7-yl)-sulfamic acid; (S)-{3-Methylcarbamoyl-2-[3-(4-trifluoromethyl-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-[3-Methylcarbamoyl-2-(4-phenyl-butyryl)-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; (S)-[3-Methylcarbamoyl-2-(5-phenyl-pentanoyl)-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; (S)-{3-Methylcarbamoyl-2-[3-(3-sulfoamino-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-[3-Methylcarbamoyl-2-(3-*p*-tolyl-propionyl)-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; (S)-{2-[3-(3-Hydroxy-phenyl)-propionyl]-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-{2-[3-(4-Methoxy-phenyl)-propionyl]-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-[3-Benzylcarbamoyl-2-(4-propyl-benzoyl)-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; (S)-[3-Benzylcarbamoyl-2-(3-phenyl-propionyl)-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; (S)-3-Benzylcarbamoyl-7-sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid benzyl ester; (S)-{3-Methylcarbamoyl-2-[3-(3-sulfamoyl-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-{2-[3-(3-Acetylsulfamoyl-phenyl)-propionyl]-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-{3-Methylcarbamoyl-2-[3-(3-propionylsulfamoyl-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-(2-{3-[3-(2,2-Dimethyl-propionylsulfamoyl)-phenyl]-propionyl}-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl)-sulfamic acid; (S)-{2-[3-(3-Benzoylsulfamoyl-phenyl)-propionyl]-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-{3-Methylcarbamoyl-2-[3-(4-sulfamoyl-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-{2-[3-(4-Acetylsulfamoyl-phenyl)-propionyl]-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (R)-{3-Methylcarbamoyl-2-[3-(3-sulfamoyl-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (R)-{2-[3-(3-Acetylsulfamoyl-phenyl)-propionyl]-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-

sulfamic acid; (S)-3-[3-(3-Methylcarbamoyl-7-sulfoamino-3,4-dihydro-1*H*-isoquinolin-2-yl)-3-oxo-propyl]-benzoic acid; (S)-{2-[3-(3-Acetylsulfamoyl-phenyl)-propionyl]-3-phenethylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-(2-Benzoyl-3-methylcarbamoyl-1,2,3,4-tetrahydroisoquinolin-7-yl)-sulfamic acid; (S)-{2-[3-(3-Chloro-phenyl)-propionyl]-3-methylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; 7-Sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid *tert*-butyl ester; 7-Sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid benzyl ester; 2-(Benzylcarbamoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl)-sulfamic acid; [2-(3-Phenyl-propionyl)-1,2,3,4-tetrahydro-isoquinolin-7-yl]-sulfamic acid; {2-[2-(1-methyl-1*H*-indol-3-yl)-acetyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; 2-(Phenylmethanesulfonyl-1,2,3,4-tetrahydro-isoquinolin-7-yl)-sulfamic acid; 4-Oxo-4(7-sulfoamino-3,4-dihydro-1*H*-isoquinolin-2-yl)-butyric acid; {2-[3-(3-Sulfoamino-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; {2-[3-(3-Acetylsulfamoyl-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; {2-[3-(3-Sulfamoyl-phenyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; (S)-4-(3-Methylcarbamoyl-7-sulfoamino-3,4-dihydro-1*H*-isoquinolin-2-yl)-4-oxo-butyric acid; (S)-3-Phenethylcarbamoyl-7-sulfoamino-1,2,3,4-tetrahydro-naphthalene-2-carboxylic acid *tert*-butyl ester; (S)-3-Ethylcarbamoyl-7-sulfoamino-1,2,3,4-tetrahydro-naphthalene-2-carboxylic acid *tert*-butyl ester; (S)-(3-Benzylcarbamoyl-2-hexanoyl-1,2,3,4-tetrahydro-isoquinolin-7-yl)-sulfamic acid; (S)-3-Benzylcarbamoyl-7-sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid *tert*-butyl ester; (R)-7-Nitro-1,2,3,4-tetrahydro-isoquinoline-3-carboxylic acid; (S)-3-Methylcarbamoyl-7-sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid *tert*-butyl ester; (S)-7-Nitro-3,4-dihydro-1*H*-isoquinoline-2,3-dicarboxylic acid-2-*tert*-butyl ester-3-methyl ester; (S)-3-Hydroxymethyl-7-sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid *tert*-butyl ester; (S)-3-(Methoxy-methyl-carbamoyl)-7-sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid *tert*-butyl ester; (S)-3-(Methoxy-methyl-carbamoyl)-7-sulfoamino-3,4-dihydro-1*H*-isoquinoline-2-carboxylic acid *tert*-butyl ester; (S)-7-Sulfoamino-3,4-dihydro-1*H*-isoquinoline-2,3-dicarboxylic acid 2-*tert*-butyl ester 3-isobutyl ester; {3-Methylcarbamoyl-2-[3-(naphthalene-1-sulfonyl)-propionyl]-1,2,3,4-tetrahydro-isoquinolin-7-yl}-sulfamic acid; and R-[1-Carbamoylmethyl-2-oxo-2(7-sulfoamino-3,4-dihydro-1*H*-isoquinolin-2-yl)-ethyl]-carbamic acid *tert* butyl ester.

17. A method of treating a protein tyrosine phosphatase (PTPase) mediated disorder comprising administering a compound of Claim 1 to a subject in need thereof.

18. The method of Claim 17, wherein the disorder is selected from the group consisting of atherosclerotic cardiovascular disease including peripheral vascular disease, coronary disease and cerebral vascular disease; heart failure; hypertension; diabetes (Type 1 and Type 2); skeletal muscle atrophy; osteoporosis; obesity; disorders of the gastrointestinal tract including inflammatory bowel disease and ulcer; wound healing and wrinkle repair/prevention; hair loss and cancer.
19. A pharmaceutical composition comprising:
  - a) safe and effective amount of a compound of Claim 1;
  - b) a pharmaceutically-acceptable carrier.